

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference FP2419/UP	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No.. PCT/SG2004/000340	International filing date (day/month/year) 15 October 2004	Priority date (day/month/year) 17 October 2003	
International Patent Classification (IPC) or national classification and IPC  Int. Cl.  G06F 19/00 (2006.01)      G06F 17/30 (2006.01)			
Applicant SAUNDERS, Peter et al			

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36:
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
  - a. ☒ (sent to the applicant and to the International Bureau) a total of 6 sheets, as follows:
    - ☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
    - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
  - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items:
 

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application

Date of submission of the demand 16 August 2005	Date of completion of this report 30 January 2006
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer  Matthew Hollingworth Telephone No. (02) 6283 2024

## Box No. I Basis of the report

1. With regard to the language, this report is based on:

☒ The international application in the language in which it was filed☐ A translation of the international application into  
translation furnished for the purposes of:

, which is the language of a

☐ international search (under Rules 12.3(a) and 23.1 (b))☐ publication of the international application (under Rule 12.4(a))☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:☐ the international application as originally filed/furnished☒ the description:

pages 1-35 as originally filed/furnished

pages\* received by this Authority on with the letter of

pages\* received by this Authority on with the letter of

☒ the claims:

pages as originally filed/furnished

pages\* as amended (together with any statement) under Article 19

pages\* 36-41 received by this Authority on 16<sup>th</sup> August 2005 with the letter of the same date

pages\* received by this Authority on with the letter of

☒ the drawings:

pages 1-11 as originally filed/furnished

pages\* received by this Authority on with the letter of

pages\* received by this Authority on with the letter of

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.3. ☐ The amendments have resulted in the cancellation of:☐ the description, pages☐ the claims, Nos.☐ the drawings, sheets/figs☐ the sequence listing (*specify*):☐ any table(s) related to the sequence listing (*specify*):4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).☐ the description, pages☐ the claims, Nos.☐ the drawings, sheets/figs☐ the sequence listing (*specify*):☐ any table(s) related to the sequence listing (*specify*):

\* If item 4 applies, some or all of those sheets may be marked "superseded."

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims 1-32	YES
	Claims	NO
Inventive step (IS)	Claims	YES
	Claims 1-32	NO
Industrial applicability (IA)	Claims 1-32	YES
	Claims	NO

## 2. Citations and explanations (Rule 70.7)

- D1: WO 2001/084444 A1 (COMEDEX, INC.), 8 November 2001
- D2: US 2003/0182160 A1 (LAHTENMAKI), 25 September 2003
- D3: WO 2001/065452 A1 (MANNATECH, INC.), 7 September 2001

INVENTIVE STEP (IS) claims 1-32

Claims 1, 15 and 32: These claims are seen to lack inventive step in light of either document D1 or D3. Each of them discloses an apparatus with most of the claimed features, including "information ... on counterproductive effects ... when combined with another products": in the case of D3, the passage at page 7, lines 10-15 states that "information ... may include adverse medications or other products to avoid while taking the ingredient"; in D1, figure 14 shows information on counterproductive effects (the "Drug Interactions" column). The claims are distinguished from the citations by their further inclusion of "synergistic effects," information not explicitly described in either document. However, D3 is highly suggestive of such a feature in its storage of "information relating to natural ingredients that may be used ... in combination with other ingredients to obtain a desired health benefits." (Similarly, in D1, "drug interactions" could easily be seen to include information on synergies between ingredients.) Since information on such synergies would be readily available for each ingredient in the databases described in the citations, and in light of these suggestions, it is considered that the inclusion of such information in the database of either citation would be a straightforward addition and would thereby achieve the claimed invention.

Claims 2-14 and 16-28: The features of these claims, when not disclosed in either D1 or D3, are not considered to confer inventive step in light of that citation. The features are seen merely to define well-known integers in systems of this sort, and would be readily conceived by a skilled addressee during implementation of any of the cited inventions.

Claims 29-31: These claims lack inventive step in light of D2. In this citation, paragraphs 62-80 describe the collation of separate product and active ingredient databases. They do not explicitly describe the claimed steps, such as determining media doses, but their intent is the same. Therefore, the claimed method is seen to be at most a technical equivalent of that described, since the steps themselves are all straightforward.

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**Claims**

1. Apparatus for determining health effect of a selected product, or product(s) providing a selected health effect, the apparatus comprising:
  - 5 a database of products and associated health effects, the database comprising information on synergistic effects of some or all of the products in the database and counterproductive effects of some or all of the products in the database, when combined with another product or products;  
an input for a user to input the selected product or selected health effect;
  - 10 a processor for determining health effect of the selected product from the database and/or for determining product(s) from the database providing the selected health effect; and  
an output for outputting information to the user.
2. Apparatus according to claim 1 further comprising weighing scales  
15 connected to the input, for weighing the selected product.
3. Apparatus according to claim 2 wherein the weighing scales comprise a user display connected to the output.
- 20 4. Apparatus according to any one of the preceding claims further comprising a barcode scanner connected to the input, for scanning a barcode of the selected product.
- 25 5. Apparatus according to any one of the preceding claims wherein the database comprises information on the daily consumption quantity for some or all of the products in the database, required to produce the health effect.

37

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6. Apparatus according to any one of the preceding claims wherein the database comprises the price of some or all the products in the database.
7. Apparatus according to any one of the preceding claims wherein the database comprises information on the biologically active chemical or chemicals producing the health effect in some or all the products in the database.
8. Apparatus according to claim 7 wherein the database comprises information on the CAS number of biologically active chemical(s) in the products.
9. Apparatus according to claim 7 or claim 8 wherein the database comprises information on the content of biologically active chemical(s) in each product.
10. Apparatus according to any one of the preceding claims wherein the processor is a computer.
11. Apparatus according to claim 10 wherein the database is stored on a storage device for use with the computer.
12. Apparatus according to claim 10 wherein the database is stored on the computer hard drive.
13. Apparatus according to any one of claims 10 to 12 wherein the input is a computer user interface.
14. Apparatus according to any one of claims 10 to 13 wherein the output is a computer user interface.

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15. A method for determining health effect of a selected product, or product(s) providing a selected health effect, the method comprising the steps of:

- 5 providing a database of products and associated health effects, the database comprising information on synergistic effects of some or all of the products in the database and counterproductive effects of some or all of the products in the database, when combined with another product or products;  
inputting the selected product or selected health effect into a user input;  
10 determining health effect of the selected product from the database, or product(s) from the database providing the selected health effect; and  
outputting information to the user.

16. A method according to claim 15 wherein the step of inputting  
15 comprises selecting the product or health effect from a pre-determined list.

17. A method according to claim 15 or claim 16 wherein the step of inputting comprises typing the health effect or product name.

20 18. A method according to any one of claims 15 to 17 wherein the step of inputting the product comprises scanning a product barcode.

19. A method according to any one of claims 15 to 18 wherein the step of inputting comprises inputting the weight of a product.

25 20. A method according to claim 19 wherein inputting the weight of a product is via weighing scales connected to the input.

21. A method according to any one of claims 15 to 20 wherein the step of  
30 inputting the product comprises inputting a chemical name.

22. A method according to any one of claims 15 to 21 wherein the step of inputting the product comprises inputting a chemical CAS number.

5 23. A method according to any one of claims 15 to 22 wherein the step of inputting the product comprises inputting information on the source of the product.

10 24. A method according to any one of claims 15 to 23 wherein the step of providing a database of products and associated health effects, comprises providing a database including information on the daily consumption quantity for some or all of the products in the database, required to produce the health effect.

15 25. A method according to any one of claims 15 to 24 wherein the step of providing a database of products and associated health effects, comprises providing a database including the price of some or all the products in the database.

20 26. A method according to any one of claims 15 to 25 wherein the step of providing a database of products and associated health effects, comprises providing a database including information on the biologically active chemical or chemicals producing the health effect in some or all the products in the database.

25 27. A method according to any one of claims 15 to 26 wherein the step of providing a database of products and associated health effects, comprises providing a database including information on the CAS number of biologically active chemical(s) in the products.

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28. A method according to any one of claims 15 to 27 wherein the step of providing a database of products and associated health effects, comprises providing a database including information on the content of biologically active chemical(s) in each product.

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29. A method of generating a database of products and associated health effects, comprising the steps of:

- a) providing a first database of products and the contents of biologically active chemicals in those products;
- 10 b) providing a second database of biologically active chemicals and median effective doses of those chemicals required to provide particular health effects;
- c) selecting a product P from the first database;
- d) from the first database, determining a biologically active chemical B in product P and the content C of biologically active chemical B in product P;
- 15 e) from the second database, determining the median effective dose D of biologically active chemical B to provide a particular health effect H;
- f) determining the daily consumption quantity DCQ of product P required to provide health effect H, from the results at steps d) and e);
- 20 g) inputting product P, daily consumption quantity DCQ, biologically active chemical B, content C, median effective dose D and health effect H into a third database; and
- h) repeating one or more of steps c) to g).

25 30. Apparatus according to any one of claims 1 to 14 wherein the database is generated by the method of claim 29.

31. A method according to any one of claims 15 to 28 wherein the database is generated by the method of claim 29.

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32. A method for determining health effect of a selected product, or product(s) providing a selected health effect, the method comprising the steps of:

5 user computer means receiving an input on the selected product or selected health effect;

host computer means determining, from a database of products and associated health effects, health effect of the selected product, or product(s) providing the selected health effect, the database comprising information on synergistic effects of some or all of the products in the database and  
10 counterproductive effects of some or all of the products in the database, when combined with another product or products; and

user computer means outputting information to a user.